

Amendments to the Claims:

This listing of the claims replaces all prior versions and listing of claims in this application.

Listing of Claims:

Claims 1-9 (Canceled)

10. (withdrawn) A system for converting natural gas into liquid petroleum products, the system comprising:

a syngas synthesis subsystem for converting natural gas to a syngas which, in turn, comprises carbon monoxide, carbon dioxide, hydrogen, and water;

a syngas adjusting subsystem for removing carbon dioxide and hydrogen from said syngas to produce an adjusted syngas; and

a product synthesis subsystem for converting said adjusted syngas into said liquid hydrocarbon products.

11. (withdrawn) The system of claim 10 wherein said syngas synthesis and compression subsystem comprises:

a steam reformer for converting said natural gas to said syngas.

12. (withdrawn) The system of claim 11 wherein said product synthesis subsystem comprises;

at least one Fischer-Tropsch reactor.

Canceled

Canceled

13. (withdrawn) The system of claim 10 wherein said syngas adjusting subsystem comprises:

a means for removing said carbon dioxide from said syngas; and

a means for removing hydrogen from said syngas.

14. (withdrawn) The system of claim 13 including:

means for mixing at least some of said removed carbon dioxide into said natural gas before said natural gas enters said steam reformer.

15. (withdrawn) The system of claim 10 including:

a liquid hydrocarbon products upgrading subsystem comprising:

a distillation column.

16. (withdrawn) The system of claim 10 wherein said syngas synthesis subsystem and said product synthesis subsystem are comprised of previously used components from the syngas synthesis subsystem and the product synthesis subsystem of a plant which was previously used to convert natural gas to methanol.

^A
~~17.~~ (original) The method for modifying a natural gas-to-methanol conversion system having a syngas synthesis subsystem and a product synthesis subsystem to a natural gas-to-liquid hydrocarbon products system, said method comprising:

installing a syngas adjusting subsystem to receive syngas from said syngas synthesis subsystem and remove carbon dioxide and hydrogen from said syngas to produce an adjusted syngas; and

changing the catalyst in said product synthesis subsystem from a catalyst which converts syngas to methanol to a catalyst which converts said adjusted syngas to said liquid hydrocarbon products.

1

2 ~~18~~. (original) The method of claim ~~17~~ including:
installing a line for flowing carbon dioxide from said syngas adjusting subsystem to said syngas synthesis subsystem for mixing with said natural gas.

2

3 ~~19~~. (original) The method of claim ~~18~~ including:
a product upgrading subsystem adapted to receive said liquid hydrocarbon products from said product synthesis subsystem.

3

4 ~~20~~. (amended) The method of claim ~~19~~ including:
[[~~means for~~]] returning at least a portion of said removed hydrogen to said syngas synthesis subsystem for use as fuel and to said product upgrading subsystem for use in upgrading said liquid hydrocarbons.

A

5 ~~21~~. (new) ~~The~~ method for converting an original natural gas-to-methanol system having a syngas synthesis subsystem and a product synthesis subsystem into a natural gas-to-liquid hydrocarbon products system, said method comprising:

adapting said syngas synthesis subsystem of said original natural gas-to-methanol to be connected to an inlet stream of natural gas from a local source for converting said natural gas into syngas;

installing a syngas adjusting subsystem between the original said syngas subsystem and the original said product synthesis subsystem, said syngas adjusting subsystem being adapted to receive syngas from said syngas synthesis subsystem and remove at least a portion of the carbon dioxide and at least a portion of the hydrogen from said syngas as said syngas passes therethrough whereby the hydrogen to carbon dioxide in said syngas is adjusted to a ratio of about 2 as the adjusted syngas exits said syngas adjusting subsystem; and

changing the catalyst in the Fischer-Tropsch reactor in the original said product synthesis subsystem from a catalyst

which converts syngas to methanol to a catalyst which converts said adjusted syngas to said liquid hydrocarbon products.

~~6~~ ⁵ 22. (new) The method of claim ~~21~~ wherein said Fischer-Tropsch reactor is comprised of a pressure vessel having a plurality of tubes therein which are filled with said catalyst for converting the adjusted syngas to said liquid hydrocarbons.

~~7~~ ⁵ 23. (new) The method of claim ~~21~~ including:
installing a product upgrading subsystem in said natural gas-to-liquid hydrocarbon products system adapted to receive the liquid hydrocarbons from said reactor in said product synthesis subsystem and separate said liquid hydrocarbons products into the desired individual products.

~~8~~ ⁷ 24. (new) The method of claim ~~23~~ wherein one of said desired individual products is diesel.

~~9~~ ⁷ 25. (new) The method of claim ~~23~~ including:
providing means within said original product synthesis subsystem for recycling a portion of said liquid hydrocarbon products to said Fischer-Tropsch reactor before said liquid hydrocarbons enter said product upgrading subsystem to control the temperature in said reactor.

~~10~~ ⁸ 26. (new) The method of claim ~~24~~ including:
providing means for recycling carbon dioxide separated from said syngas in said syngas adjusting subsystem to said inlet natural gas stream before said inlet stream enters said syngas synthesis subsystem.

~~11~~ ⁹ 27. (new) The method of claim ~~25~~ including:
providing means for returning at least a portion of said removed hydrogen to said syngas synthesis subsystem for use as fuel therein.

8

12 ~~28~~. (new) The method of claim ~~24~~⁸ including:
providing means for returning at least a portion of
said removed hydrogen to said product upgrading subsystem for use
in upgrading said liquid hydrocarbons.

13 ~~29~~. (new) The method of claim ~~28~~⁷ wherein said product
upgrading subsystem includes:

a fractionating column adapted to receive said liquid
hydrocarbon products from said Fischer-Tropsch reactor for
separating said liquid hydrocarbon products into individual liquid
hydrocarbon products.